





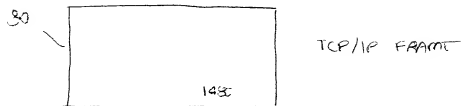
$$\frac{\text{data. rate}}{\text{cab}} = \frac{\text{chx. rate}}{\text{chx. rate} + \text{overhead}} \cdot \left( \frac{\text{# bits per symbol}}{\text{# code words per correction}} \right) \cdot \left( \frac{\text{in. correction blocking}}{\text{ftr. blocking}} \right)$$

$$\left(\frac{3}{2}\right), \left(\frac{2}{1}\right), \left(\frac{1}{3}\right)$$

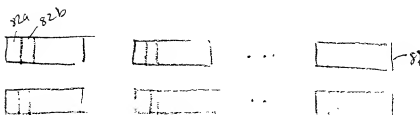
$$\begin{aligned} \text{QPLN} &= 2 \\ \text{SPK} &= 3 \\ \text{LQPM} &= 4 \\ \text{GQPM} &= 6 \end{aligned}$$

1.2288 m

FIG. 3



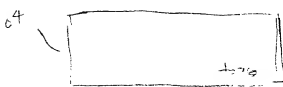
SIGMEM 60



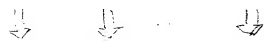
BLOCK ENVELOPE 61



FEC ENVELOPE 62



MOD 63  
 (SAM)



DEMUX 64

FIG. 4

Described

Ch. 1000

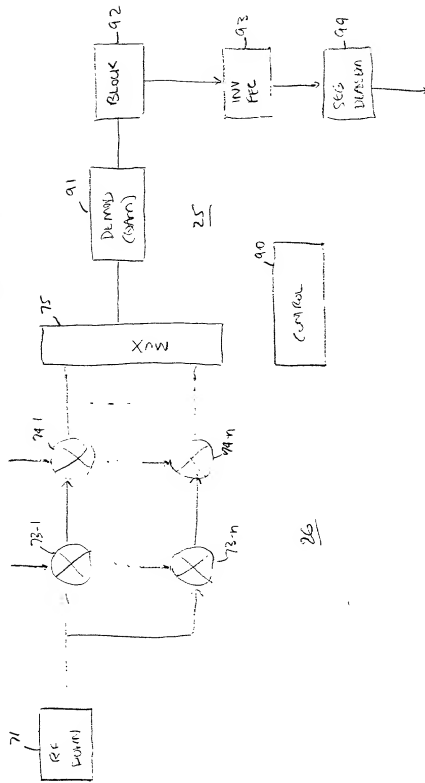


FIG. 4

Fig. 5

Table 1 - Theoretical Effective Information Bit Rate (Mbps) for 4096 Block Size

Proposed 4-CDMAximum' physical layer using various numbers of codes and code rates with 2048 block size.

Mod	64	64	64	16	16	16	8	8	8	4	4	4	4
Size	1482	858	684	1482	858	684	1482	858	684	1482	858	684	2048
Codes	2	4	6	8	10	12	14	16	18	20	22	24	26
0.333	0.193	0.154	0.222	0.129	0.103	0.167	0.097	0.077	0.111	0.064	0.051		
0.667	0.386	0.308	0.445	0.257	0.205	0.333	0.193	0.154	0.222	0.129	0.103		
1.000	0.579	0.462	0.667	0.386	0.308	0.500	0.290	0.231	0.333	0.193	0.154		
1.334	0.772	0.616	0.889	0.515	0.410	0.667	0.386	0.308	0.445	0.257	0.205		
1.667	0.965	0.770	1.112	0.644	0.513	0.834	0.483	0.385	0.556	0.322	0.257		
2.001	1.158	0.923	1.334	0.772	0.616	1.000	0.579	0.462	0.667	0.386	0.308		
2.334	1.351	1.077	1.556	0.901	0.718	1.167	0.676	0.539	0.778	0.450	0.359		
2.668	1.544	1.231	1.778	1.030	0.821	1.334	0.772	0.616	0.889	0.515	0.410		
3.001	1.737	1.385	2.001	1.158	0.923	1.501	0.869	0.693	1.000	0.579	0.462		
3.335	1.931	1.539	2.223	1.287	1.026	1.667	0.965	0.770	1.112	0.644	0.513		
3.668	2.124	1.693	2.445	1.416	1.129	1.834	1.062	0.846	1.223	0.708	0.564		
4.001	2.317	1.847	2.668	1.544	1.231	2.001	1.158	0.923	1.334	0.772	0.616		
4.335	2.510	2.001	2.890	1.673	1.334	2.167	1.258	1.000	1.445	0.837	0.667		
4.668	2.703	2.155	3.112	1.802	1.436	2.334	1.351	1.077	1.556	0.901	0.718		

- Theoretical Effective Information Bit Rate (Mbps) for 2048 Block Size

FIG 6

Proposed 'CDMMaximum' physical layer using various numbers of codes and code rates with 1024 block size.

Mod Info Size	64 676 1024	64 363 1024	16 676 1024	16 363 1024	8 676 1024	8 363 1024	4 676 1024	4 363 1024
Codes	2	4	6	8	10	12	14	16
2	0.304	0.163	0.203	0.109	0.152	0.082	0.101	0.054
4	0.608	0.327	0.406	0.218	0.304	0.163	0.203	0.109
6	0.913	0.490	0.608	0.327	0.456	0.245	0.304	0.163
8	1.217	0.653	0.811	0.436	0.608	0.327	0.406	0.218
10	1.521	0.817	1.014	0.545	0.761	0.408	0.507	0.272
12	1.825	0.980	1.217	0.653	0.913	0.490	0.608	0.327
14	2.129	1.143	1.420	0.762	1.065	0.572	0.710	0.381
16	2.434	1.307	1.622	0.871	1.217	0.653	0.811	0.436
18	2.738	1.470	1.825	0.980	1.369	0.735	0.913	0.490
20	3.042	1.634	2.028	1.089	1.521	0.817	1.014	0.545
22	3.346	1.797	2.231	1.198	1.673	0.898	1.115	0.599
24	3.650	1.960	2.434	1.307	1.825	0.980	1.217	0.653
26	3.955	2.124	2.636	1.416	1.977	1.062	1.318	0.708
28	4.259	2.287	2.839	1.525	2.129	1.143	1.420	0.762

Theoretical Effective Information Bit Rate (Mbps) for 1024 Block Size

F/G.7